

## REMARKS

### A. Background

Claims 1-9 were pending in the application at the time of the Office Action. Claims 1-9 were rejected as being obvious over cited art. By this response applicant has amended claims 1-9. As such, claims 1-9 are presented for the Examiner's consideration in light of the following remarks.

### B. Proposed Amendments

By this response, Applicant has amended the drawings to address formal issues. Specifically, Figures 1A-1C, 2A-2C, 3, and 4 have been labeled as prior art.

Applicant has herein amended claims 1-9 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. Support for the amendments to the claims may be found in the specification as originally filed, specifically at least in Figures 5A, 11A and 12A and pages 23-25 of the specification. In view of the foregoing, Applicant respectfully submits that the amendments to the drawings and the claims do not introduce new matter and entry thereof is respectfully requested.

### C. Objection to the Drawings

Paragraph 2 of the Office Action objects to Figures 1A-1C, 2A-2C, 3, and 4 as only illustrating that which is old, but not being identified as such. In response thereto, Applicant has amended Figures 1A-1C, 2A-2C, 3, and 4 to include the label "Prior Art." In view of the foregoing, Applicant respectfully requests that the objection to the drawings be withdrawn.

D. Claim Rejections

Paragraphs 3 and 4 of the Office Action reject claims 1-9 under 35 USC § 103(a) as being unpatentable over Figures 3 and 4 of the present application, which the Office Action alleges is admitted prior art, in view of U.S. Patent Application Publication No. 2005/0286895 to Lee et al. (“Lee”). Applicant respectfully traverses this rejection and submits that the allegedly obvious combination would not include all the limitations recited in the rejected claims.

Lee is directed to a wavelength-division-multiplexing passive optical network using fiber detectors and/or wavelength tracking components. See Title. More specifically, the invention is targeted toward resolving the problem of misalignment of the wavelength band for a remote node which is typically located outdoors and subjected to temperature variation. See paragraphs [0003]-[0006].

As shown in Figure 1, Lee discloses a network in which a “central office contains a first group of optical transmitters 101-103 emitting optical signals in a first band of wavelengths, a first group of optical receivers 104-106 to accept an optical signal in a second band of wavelengths...” Paragraph [0016], *emphasis added*. A band splitting filter is also disclosed, which “splits the first band of wavelengths and the second band of wavelengths signals to different ports.” Paragraph [0019]. In other words, while Lee may use multiple wavelengths, Lee discloses only two separate bands of wavelengths, one for the transmitted (or downlink) signals and the other for the received (or uplink) signals, as viewed from the “central office.” Applicant can find no teaching or suggestion within Lee of more than these two bands of wavelengths.

The Office Action concedes that the allegedly admitted prior art “fails to teach the wavelength bands U<sub>a</sub> and U<sub>b</sub> are set adjacent to each other, and the wavelength bands U<sub>a</sub> and D<sub>a</sub> or the

wavelength bands Ub and Db are set adjacent to each other,” and points to *Lee* to remedy this deficiency. Specifically, the Office Action asserts that “*Lee* ... teaches a downlink optical signal within a first broadband including wavelength bands or the downlink optical wavelengths are set adjacent to each other and an uplink optical signal within a second broadband including wavelength bands or the uplink optical wavelengths are set adjacent to each other and the downlink optical signals and uplink optical signals are set adjacent each other.” See page 4. Based on this, the Examiner asserts that “it would have been obvious ... to incorporate the wavelength bands Ua and Da are set adjacent to each other and the wavelength bands Ub and Db are set adjacent to each other as taught by *Lee et al.*”

It appears from the foregoing that the Office Action has characterized the downlink optical wavelengths within the first wavelength band of *Lee* as corresponding to the claimed downlink wavelength bands Da and Db and the uplink optical wavelengths within the second wavelength band of *Lee* as corresponding to the claimed uplink wavelength bands Ua and Ub. Applicant respectfully submits that this characterization of *Lee* as it pertains to the rejected claims cannot be maintained.

As noted above, while *Lee* may use multiple wavelengths, *Lee* only discloses two separate bands of wavelengths, one for the downlink signals and one for the uplink signals. That is, there is no teaching within *Lee* that the downlink optical signals comprise two separate bands of wavelengths and the uplink optical signals comprise two other separate bands of wavelengths, as required by the rejected claims. Because *Lee* teaches only one band of wavelengths for downlink signals and one band of wavelengths for the uplink signals, *Lee* cannot teach or suggest two separate uplink bands being set adjacent to each other, or one of the two uplink bands being set adjacent to one of the two downlink bands.

In view of the foregoing, contrary to the assertion of the Office Action, *Lee* does not cure the admitted deficiencies of the allegedly admitted prior art. That is, even if, *arguendo*, the allegedly admitted prior art were combined with *Lee* in the allegedly obvious manner set forth in the Office Action, the combination would not teach or suggest wavelength bands Da and Db for downlink optical signals and wavelength bands Ua and Ub for uplink optical signals, “the wavelength bands Ua and Ub are set adjacent to each other, and the wavelength bands Ua and Da or the wavelength bands Ub and Db are set adjacent to each other,” as recited in the rejected independent claims 1 and 7-9. Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 1 and 7-9 be withdrawn.

Claims 2-6 depend from claim 1 and thus incorporate the limitations thereof. As such, applicant submits that claims 2-6 are distinguished over the cited art for at least the same reasons as discussed above with regard to claim 1.

Furthermore, Applicant submits that many of the dependent claims are independently distinguishable over the cited art combination. For example, the allegedly admitted prior art only teaches the uplink and downlink bands in the following specific order: Ua, Da, Ub, Db. See Figure 4.

And as noted above, *Lee* fails to teach more than two total bands. As such, the cited art fails to teach Ua, Ub, Da, and Db in the specific orders recited in dependent claims 2-4.

Accordingly, Applicant respectfully requests that the obviousness rejection with respect to claims 2-6 also be withdrawn.

No other objections or rejections are set forth in the Office Action.

E. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 1-9 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 18th day of December 2007.

Respectfully submitted,

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